

IN THE CLAIMS:

Amendments to the Claims

Please cancel claims 3 - 14 without prejudice or disclaimer of the subject matter thereof and add the following new claims.

Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1 and 2 (canceled)

Claims 3 - 14 (canceled)

15. (new) A plasma processing apparatus, comprising:

a vacuum chamber;

a stage which includes a cooling jacket disposed within a processing chamber inside of the vacuum chamber, and an upper member having a protrusion portion attached on the cooling jacket, the cooling jacket having a path disposed at an inside thereof for passing liquid coolant therethrough, and a wafer which is supported on the protrusion portion of the upper member; and

a heater disposed within the upper member, an outer circumferential end of the heater being positioned outwardly from an outer circumferential end of the protrusion portion of the upper member.

16. (new) A plasma processing apparatus according to claim 15, further comprising an electrode, disposed above the heater within the upper member for attracting the wafer which is supported on an upper surface of the protrusion portion of the upper member.

17. (new) A plasma processing apparatus according to claim 16, wherein the electrode is disposed within the protrusion portion of the upper member.

18. (new) A plasma processing apparatus according to claim 15, wherein the outer circumferential end of the heater is positioned outwardly from the outer circumferential end of the protrusion portion of the upper member so as to enable uniform heating of a substantially entire surface area of the upper member, and wherein a temperature distribution of the wafer is made substantially uniform when an amount of heat input from a plasma generated in the vacuum processing chamber is smaller than an amount of heat generated from the heater.

19. (new) A plasma processing apparatus, comprising:

a vacuum chamber;

a stage which includes a cooling jacket disposed within a processing chamber inside of the vacuum chamber, and an upper member having a protrusion portion attached on the cooling jacket, the cooling jacket having a path disposed at an inside thereof for passing liquid coolant therethrough, and a wafer which is supported on the protrusion portion of the upper member; and

a heater disposed within the upper member, an outer circumferential end of the heater being positioned in a vicinity of an outer circumferential end of the protrusion portion of the upper member.

20. (new) A plasma processing apparatus according to claim 19, further comprising an electrode, disposed above the heater within the upper member for attracting the wafer which is supported on an upper surface of the protrusion portion of the upper member.

21. (new) A plasma processing apparatus according to claim 20, wherein the electrode is disposed within the protrusion portion of the upper member.

22. (new) A plasma processing apparatus according to claim 15, wherein the outer circumferential end of the heater is positioned in the vicinity of the outer circumferential end of the protrusion portion of the upper member so as to enable a temperature distribution of the wafer to be made substantially uniform when an amount of heat input from a plasma generated in the vacuum processing chamber is larger than an amount of heat generated from the heater.